ADAPTIVE LEARNING, MONETARY POLICY, AND THE JAPANESE BUSINESS CYCLE DYNAMICS

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Japan’s economic experience in the 1990s has attracted fervent research interests, be it on the issue of liquidity traps, optimal monetary and fiscal responses, or the structural dynamics of its underlying economy. On the empirical front, several papers point out that contrary to the experiences of other major OECD economies, Japan did not undergo a “great moderation” in the cyclical volatility of its real economic activity; rather, it may have switched from a moderate growth-low volatility regime to a low growth-high volatility regime (see, for example, Stock and Watson 2005, Yu 2005). Some attribute this empirical observation to policy mistakes, and contend that Japan needs to commit to a policy that induces higher future prices and appropriate public expectations in order to escape from the liquidity trap (see Krugman 1998, Kuttner and Posen 2002, or Svensson 2003).

Utilizing a model with adaptive learning, this paper examines the connection between public expectation, monetary policy rules, and their effect on the dynamics of the Japanese economy since the 1980s. We apply the learning framework of Evans and Honkapohja (2001, 2004) and Williams (2003) to a dynamic stochastic open economy model with nominal rigidity, similar to Gali and Monacelli (2005). We then analyze the volatility and persistence of key macroeconomic variables - the output gap, inflation, and the real exchange rate - in response to shifts in monetary policy rules. We consider different specifications of the Taylor rule that have been put forth in the literature as relevant for Japan. Clarida, Gali, and Gertler (1998) and McCallum (2000) argue that the Bank of Japan has operated under an inflation targeting regime. Andrade and Divino (2005), on the other hand, find significant evidence for exchange rate targeting. We consider these regimes and fit them into both lagged and forward-looking Taylor rule specifications in order to match the dynamics of the Japanese economy. After finding the closest empirical model fit, we consider alternative policy rules that may lead to a more stable economic environment and offer potential solutions for escaping from the liquidity trap.

REFERENCES

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